

ABSTRACT OF THE DISCLOSURE

**DETECTION OF DATA TRANSMISSION RATES
USING PASSING FREQUENCY-SELECTIVE FILTERING**

5 A data receiver, which could be an optical transceiver, a modem, a
router hub, is capable of detecting the transmission rate of incoming data.
The data is converted to electrical waves appropriate for passive or active
bandpass filtering. The frequencies at which the waves are filtered are
determined from a plurality of known possible transmission rates and are
chosen as having the most detectable difference in the power spectra. By
10 implementing a filter at the corresponding frequency(ies), data having that
(those) frequency(ies) will be transmitted. A signal detector then can receive
a signal transmitted through the filter and determine the corresponding data
rate. It is further contemplated that the multiple frequencies can be filtered
by using stages of filters and signal detectors for different frequencies or by
15 filters and detectors capable of multiple frequency operation.